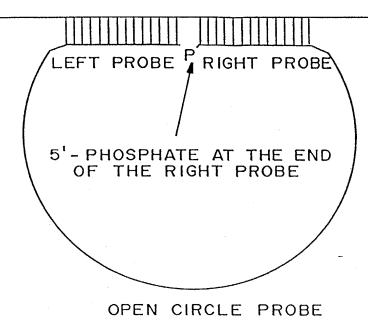
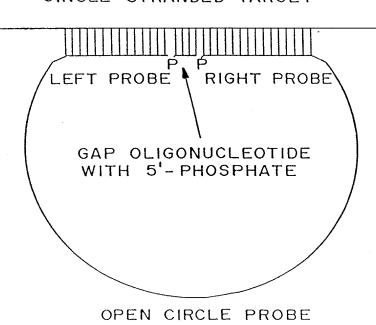
SINGLE-STRANDED TARGET



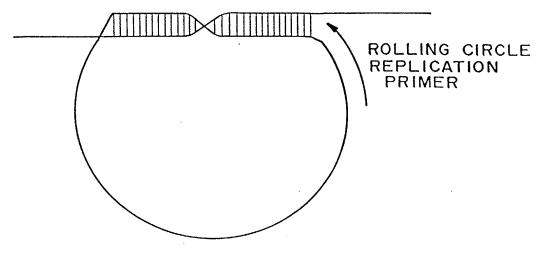
SINGLE-STRANDED TARGET

F1G. 1



F1G. 2

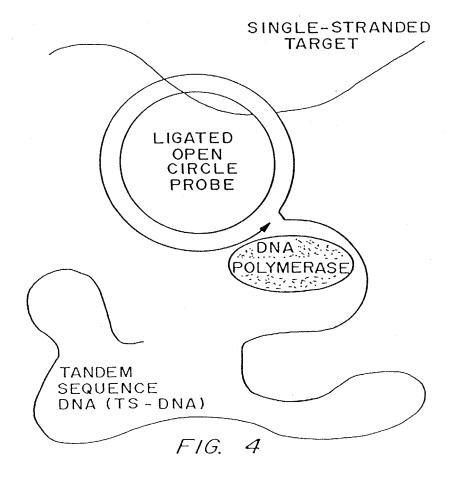
SINGLE-STRANDED TARGET



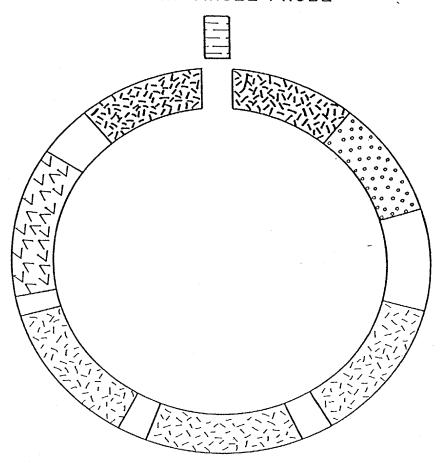
LIGATED OPEN CIRCLE PROBE

F1G. 3

ROLLING CIRCLE AMPLIFICATION



OPEN CIRCLE PROBE

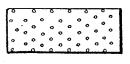




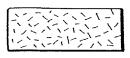
= TARGET PROBE (LEFT AND RIGHT TARGET PROBES)



= PROMOTER



= PRIMER COMPLEMENT



= DETECTION TAGS (OR SECONDARY TARGETS)



= GAP OLIGONUCLEOTIDE

F1G. 5

ADDRESS PROBE HYBRIDIZING TO TS-DNA PORTION BRIDGING GAP OLIGONUCLEOTIDE AND TARGET PROBE ENDS

5' -CCTT- -3'

GAP OLIGONUCLEOTIDE

5'-TTTTTTTTTTTTTTTTTTTTGTATTCCTTGCCTG -3' ADDRESS PROBE

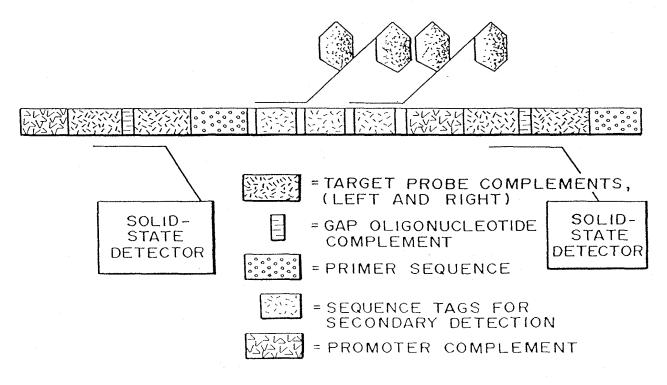
HYBRIDIZATION OF TS-DNA AND ADDRESS PROBE

3'-ACAGACGACGGAGACATAAGGAACGGACAGGTCCCTAGACGAG - 5'
| | | | | | | | | | | | | TS-DNA
GTATTCCTTGCCTG - 3' ADDRESS PROBE

5'-TTTTTTTTTTTTT

F/G. 6

DETECTION PROBES WITH FLUORESCENT LABELS



F1G. 7

LM-RCA FOLLOWED BY TRANSCRIPTION

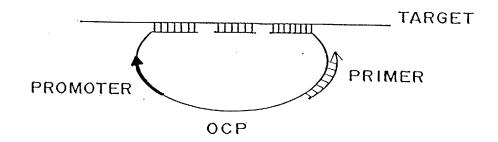
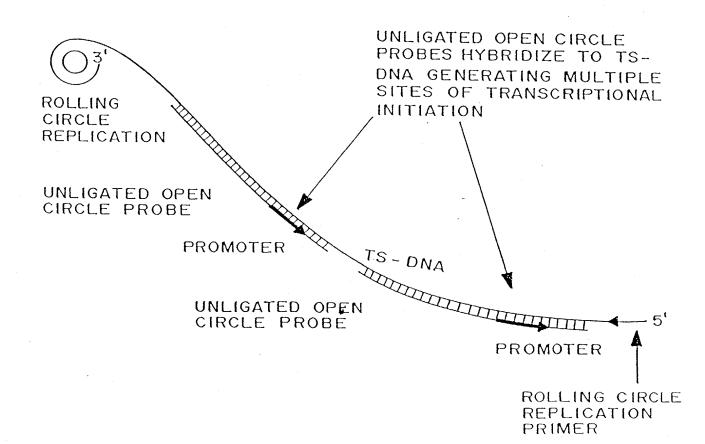
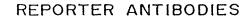


FIG. 8



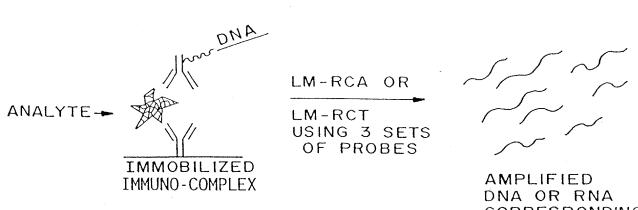


IgG1 ·
$$\frac{5'}{45 \text{ BASES}}$$
 3' DNA 1

IgG2 $\frac{3}{45 \text{ BASES}}$ 3' DNA 2

IgG3 $\frac{5'}{45 \text{ BASES}}$ 3' DNA 3

ASSAY



DNA OR RNA
CORRESPONDING
TO DNA TAG
SEQUENCE
THAT WAS
BOUND

FIG. 10

DETECTION EXAMPLE

FLUORESCENT MOIETY

#2

HYBRIDIZATION WITH THREE

SPECIFIC DETECTION PROBES

WITH DIFFERENT

LABELS

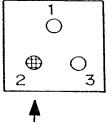
AMPLIFIED DNA OR RNA #2

DETECTION EXAMPLE

AMPLIFIED DNA OR RNA # 2

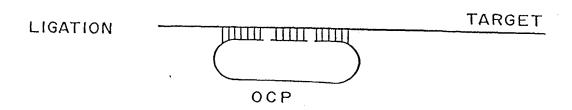
HYBRIDIZATION

DETECTOR SURFACE



AMPLIFIED RNA BINDS TO DOT #2 BY HYBRIDIZATION

F/G. 11a



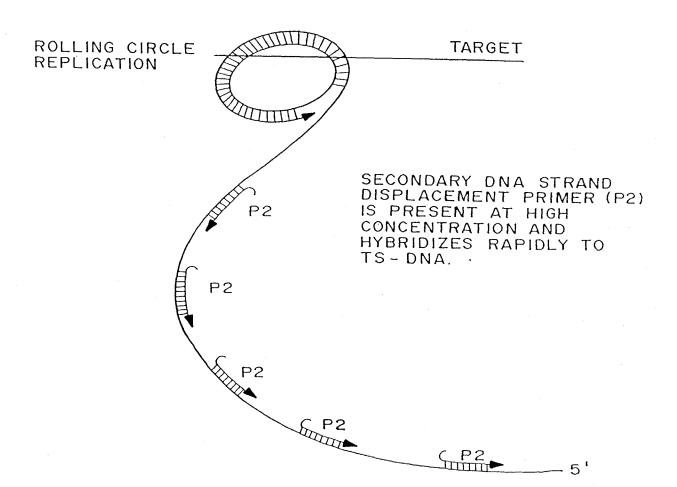


FIG. 11b

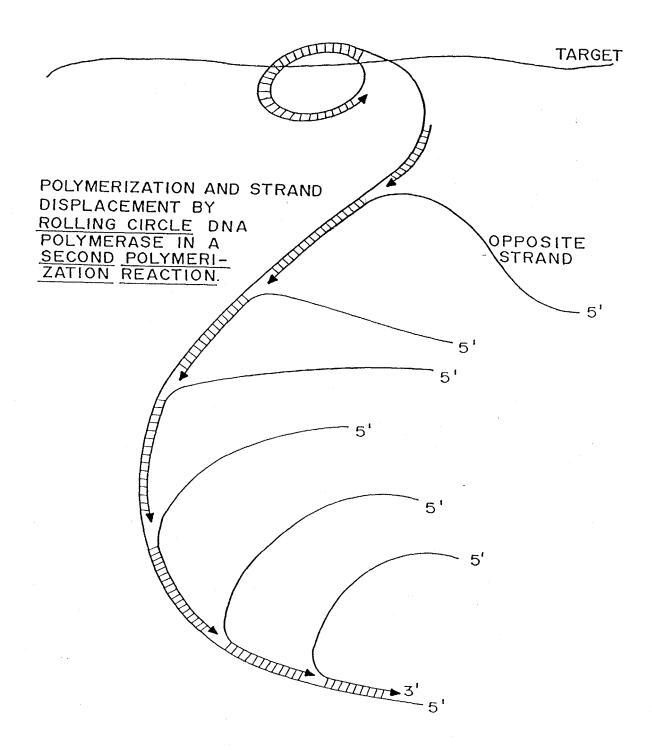
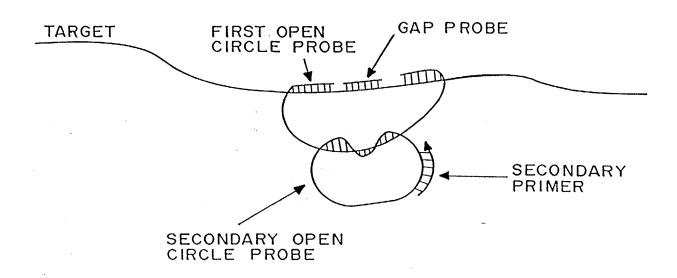
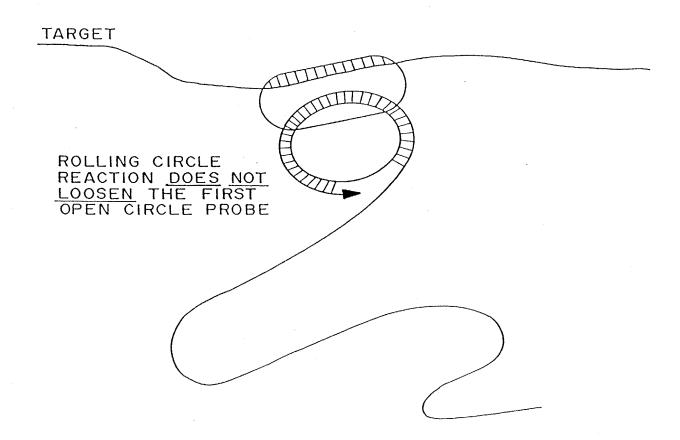
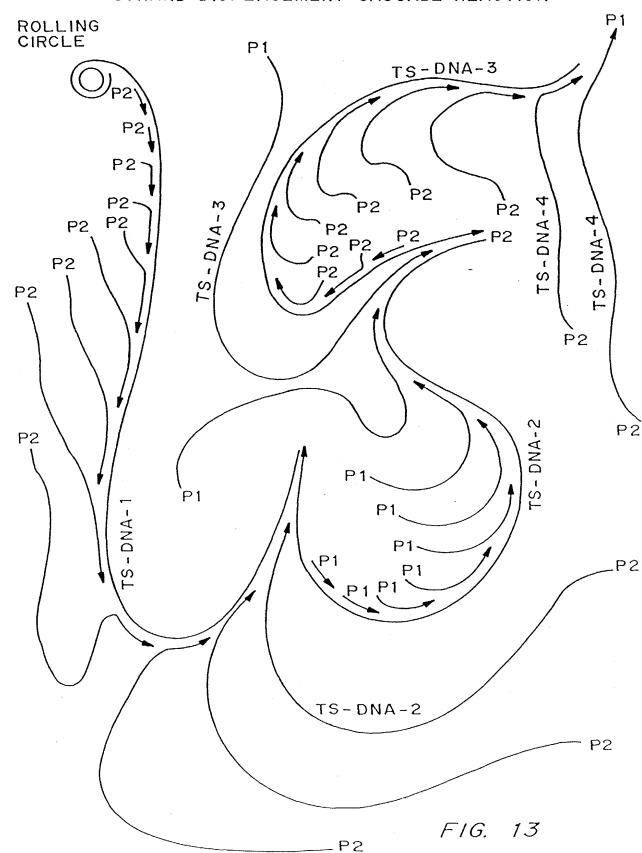


FIG. 12







- in the great rates great rates of specific to the control of specific to

OPPOSITE STRAND AMPLIFICATION

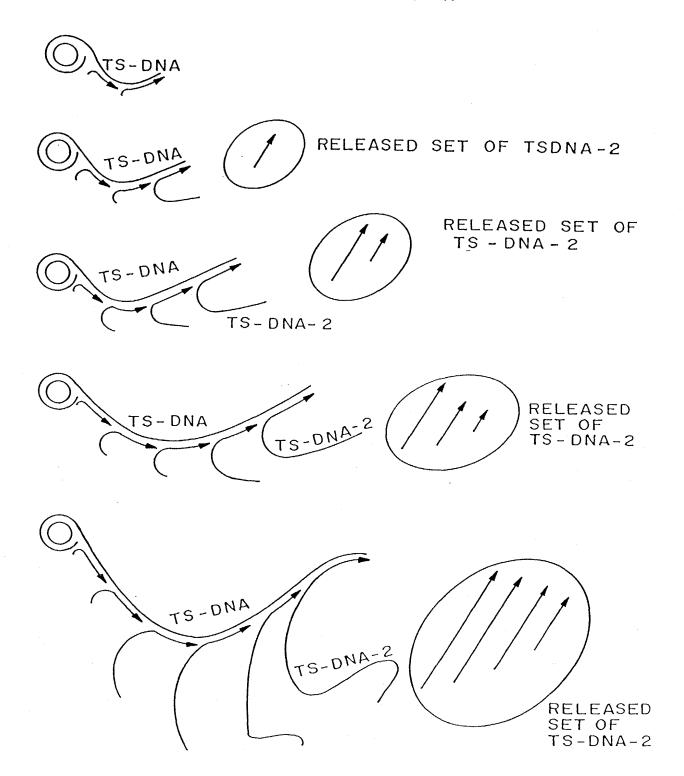


FIG. 14